

# Final Exam

CMSY-217, Spring 2013

Circle the letter of the best response for each item.

1. The `Thread` class is in the \_\_\_\_\_ package.
  - (a) `java.lang`
  - (b) `java.util.concurrent`
  - (c) `java.util.concurrent.atomic`
  - (d) `java.util.concurrent.locks`
2. A Java thread begins its lifecycle by transitioning to the \_\_\_\_\_ state.
  - (a) `runnable`
  - (b) `waiting`
  - (c) `terminated`
  - (d) `new`
3. A multithreaded application can be created in Java by extending the `Thread` class or implementing the \_\_\_\_\_ interface.
  - (a) `Concurrent`
  - (b) `Runner`
  - (c) `Runnable`
  - (d) None of the above
4. In order to cause the `run` method of a `Thread` or `Runnable` object to begin executing, one makes a call to its \_\_\_\_\_ method.
  - (a) `begin`
  - (b) `processTask`
  - (c) `start`
  - (d) None of the above
5. If a thread is currently executing a \_\_\_\_\_ block or method, other threads are blocked from executing the same code.
  - (a) `synchronized`
  - (b) `shared`
  - (c) `thread`
  - (d) `writable`

6. When using Java's built-in monitors, every object has a \_\_\_\_\_ or \_\_\_\_\_ that the monitor ensures is held by a maximum of only one thread at a time.
- (a) monitor lock, intrinsic lock
  - (b) built-in lock, free lock
  - (c) mutual exclusion lock, synchronization lock
  - (d) None of the above
7. When a thread is finished executing a statement block or method for which it had exclusive access, it can call `Object` method \_\_\_\_\_ or \_\_\_\_\_ to allow *waiting* thread(s) to transition to the runnable state.
- (a) `notifyThread`, `notifyAllThreads`
  - (b) `wakeUpThread`, `wakeUpAllThreads`
  - (c) `notify`, `notifyAll`
  - (d) None of the above
8. The \_\_\_\_\_ thread should be used to perform all tasks that manipulate Swing components since they are not thread safe.
- (a) event-handling
  - (b) event-dispatch
  - (c) GUI-handling
  - (d) None of the above
9. A(n) \_\_\_\_\_ is thrown when a `String` that is not in proper URL format is passed to a URL constructor.
- (a) `URLError`
  - (b) `MalformedURLException`
  - (c) `URLException`
  - (d) `IllformattedURLException`
10. Once a `ServerSocket` is created, a server can listen (or block) indefinitely for an attempt by a client to connect. This is accomplished with a call to the `ServerSocket` method \_\_\_\_\_.
- (a) `connect`
  - (b) `block`
  - (c) `accept`
  - (d) `listen`

11. A(n) \_\_\_\_\_ is thrown when a server address indicated by a client cannot be resolved.
- (a) `ConnectionException`
  - (b) `ServerException`
  - (c) `MalformedURLException`
  - (d) `UnknownHostException`
12. Output \_\_\_\_\_ are typically used to increase the efficiency of an application by storing large amounts of data locally so that the data can be transmitted over the network less frequently.
- (a) objects
  - (b) broadcasters
  - (c) buffers
  - (d) None of the above
13. The IP address 127.0.0.1 is also known as \_\_\_\_\_.
- (a) localhost
  - (b) remotehost
  - (c) localserver
  - (d) remoteserver
14. Specifying a port that is already in use or specifying an invalid port number when creating a `ServerSocket` results in a \_\_\_\_\_.
- (a) `BindException`
  - (b) `PortInUseException`
  - (c) `PortException`
  - (d) `ConnectionException`
15. In order to be able to send and receive messages in parallel over a network connection, a program must use \_\_\_\_\_ thread(s) of execution.
- (a) one
  - (b) two
  - (c) three
  - (d) four

16. What API do Java programs use to communicate with databases?
- (a) DBMS
  - (b) JDBC
  - (c) RDBMS
  - (d) Database
17. A \_\_\_\_\_ can be run to obtain data from a table in a database.
- (a) select
  - (b) query
  - (c) get
  - (d) None of the above
18. What is the name of the package that contains the interfaces for the API that Java uses to communicate with databases?
- (a) `java.jdbc`
  - (b) `javax.jdbc`
  - (c) `java.sql`
  - (d) `java.sql.jdbc`
19. What exception is thrown if the class loader cannot locate an appropriate driver class to connect to a database?
- (a) `NoSuchClassException`
  - (b) `ClassCastException`
  - (c) `ClassNotFoundException`
  - (d) `IllegalClassException`
20. When a `ResultSet` is first returned, its cursor is positioned \_\_\_\_\_.
- (a) before the first row
  - (b) at the first row
  - (c) at the last row
  - (d) after the last row
21. Version 4.0 of the API that Java uses to communicate with databases supports \_\_\_\_\_, so that it is not necessary to manually load the database driver before accessing a database.
- (a) automatic driver downloading
  - (b) automatic driver creation
  - (c) automatic driver discovery
  - (d) None of the above

22. A URI which specifies a document location is called a(n) \_\_\_\_\_.  
(a) address  
(b) Uniform Resource Locator (URL)  
(c) location  
(d) None of the above
23. A `Statement` object's \_\_\_\_\_ method returns a `ResultSet` object.  
(a) `executeUpdate`  
(b) `executeQuery`  
(c) `execute`  
(d) None of the above
24. Three typical tiers of a web application are the \_\_\_\_\_.  
(a) user interface, business logic, and information tiers  
(b) browser, server, and information tiers  
(c) client, middle, and top tiers  
(d) None of the above
25. Which of the following statements is true?  
(a) Servlets extend a server's functionality by allowing the server to generate dynamic content.  
(b) Servlets extend a client's functionality by allowing the web browser to generate dynamic content.  
(c) Neither of the above  
(d) Both of the above
26. Which of the following statements is true?  
(a) Servlets are an extension of JavaServer Pages (JSP) technology.  
(b) JavaServer Pages (JSP) are an extension of Servlet technology.  
(c) Neither of the above  
(d) Both of the above
27. JavaServer Faces (JSF) is a \_\_\_\_\_ that simplifies the design of an application's user interface and helps to separate the application's presentation from its business logic.  
(a) database application framework  
(b) desktop application framework  
(c) web application framework  
(d) None of the above

28. Tracking individual clients as they visit a website is know as \_\_\_\_\_.
- (a) session tracking
  - (b) client tracking
  - (c) personalizing
  - (d) stalking
29. A cookie is \_\_\_\_\_.
- (a) something you eat
  - (b) a piece of data that maintains information about a client during and possibly between browser sessions
  - (c) a piece of data that maintains information about all the servers that a client visits
  - (d) None of the above
30. What method call will cause the currently executing thread to cease execution for a period of one second?
- (a) `Thread.cease(1000);`
  - (b) `Thread.halt(1000);`
  - (c) `Thread.pause(1000);`
  - (d) `Thread.sleep(1000);`
31. The protocol that web browsers use to communicate with servers on the internet is called \_\_\_\_\_.
- (a) ASP
  - (b) HTML
  - (c) HTTP
  - (d) PHP
32. Which tool can be used to run scripts or interactive queries against a Java DB (Apache Derby) database?
- (a) dblook
  - (b) ij
  - (c) sysinfo
  - (d) None of the above

33. The \_\_\_\_\_ servlet container was used in class for Servlet and JavaServer Page (JSP) development.
- (a) GlassFish
  - (b) JBoss
  - (c) Tomcat
  - (d) WebSphere
34. Parameters which are passed to a servlet from an XHTML form using POST can be obtained from the argument of type \_\_\_\_\_ of the `doPost` method.
- (a) `HttpServlet`
  - (b) `HttpServletRequest`
  - (c) `HttpServletResponse`
  - (d) `HttpServletRequest`
35. Which is *not* a convention that a JavaBean must follow?
- (a) must have a zero-argument constructor
  - (b) instance variables must be private
  - (c) fields must be accessible by properly named getter and setter methods
  - (d) must implement the `Beanable` interface
36. Which of the following steps is required to begin developing Android applications.
- (a) register for an account at the Android Market
  - (b) download and install the Android SDK
  - (c) purchase an Android development phone
  - (d) create a provisioning profile
37. The \_\_\_\_\_ plugin for the Eclipse IDE provides a powerful, integrated environment in which to build Android applications.
- (a) ADT
  - (b) AVD
  - (c) POI
  - (d) SDK
38. Android is based upon the \_\_\_\_\_ Java implementation.
- (a) Apache Harmony
  - (b) GNU Classpath
  - (c) Java ME
  - (d) OpenJDK

39. The \_\_\_\_\_ API may be used to read, write, and modify Excel spreadsheets in the Office Open XML (.xlsx) format directly from Java using the **XSSFWorkbook** class.
- (a) Apache POI
  - (b) Java .NET
  - (c) JExcel (jxl)
  - (d) None of the above
40. The \_\_\_\_\_ API may be used to create and modify Portable Document Format (PDF) files directly from Java.
- (a) Apache PDFBox
  - (b) iText
  - (c) PJX
  - (d) All of the above